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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,201	10/30/2000	Tae-kyung Kim	1293.1144/MDS	6730

21171 7590 07/30/2003

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2653

5
DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,201

Applicant(s)

KIM ET AL.

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET-TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-48 and 71-73 is/are allowed.
- 6) ☒ Claim(s) 49,60 and 74 is/are rejected.
- 7) ☒ Claim(s) 50-59,61-70 and 75-82 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

Claim Objections

1. Claim 74 is objected to because of the following informalities:

(a) in claim 74, line 3, the term "a light sources" should be changed to --a light source--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 49 is rejected under 35 U.S.C. § 102(b) as being anticipated by Yagi (U.S. Patent 5,808,999).

Yagi teaches an optical pickup having the steps and means as recited in claim 49. For example, Yagi teaches the following:

(a) as in claim 49, a light source 12 to generate a light beam with wavelengths between roughly 400 nm and 650 nm (Fig. 8; column 1, lines 46-48; column 6, lines 23 and 24);

(b) as in claim 49, an optical element 31 to focus the light beam onto a medium 51 (Fig. 8);

(c) as in claim 49, a detector 13 to detect the light beam reflected from the medium 51 (Fig. 8);

(d) as in claim 49, a collimating lens 32 arranged in an optical path between the light source 12 and the optical element 31 (Fig. 8); and

(e) as in claim 49, the optical pickup focus the light beam onto the medium 51 with negligible aberration (Fig. 8; column 11, lines 10-18).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 60 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ueda et al. (U.S. Patent 6,418,108).

Ueda teaches an optical pickup very similar to that of the instant invention. For example, Ueda teaches the following:

(a) as in claim 60, light source 106, 112 to emit respective light beams (Fig. 9; column 18, lines 9-11);

(b) as in claim 60, one light source 112 to emit light beams of less than roughly 500nm (Fig. 9; column 18, lines 10-12);

(c) as in claim 60, the optical element 111 to focus light beams onto respective media 102 (Fig. 9);

(d) as in claim 60, detectors 110, 123 to detect respective light beam reflected from the media (Fig. 9);

(e) as in claim 60, a collimating lens 108, 122 arranged between the light source 106, 112 and the optical element 119 (Fig. 9);

(f) as in claim 60, the collimating lens 108, 122 comprises a surface with a diverging power (Fig. 9); and

(g) as in claim 60, the optical system focuses the light beams onto respective media with negligible aberration (Fig. 9).

However Ueda does not teach the following:

(a) as in claim 60, both light sources to emit light beams of less than roughly 500 nm.

Although Ueda does not teach both the sources are in a range of less than 500 nm, however, for the benefit of accessing two high density recording media instead of just one, it would have been obvious to one of ordinary skill in the art replace the light source 106 with the light source 112 so that there are two light sources both are in the range of less than 500 nm so that

data recorded in different types/formats of high density recording medium can be read, copied and transferred.

6. Claim 74 has limitations similar to those treated in the above rejection, and are met by the reference as discussed above.

Allowable Subject Matter

7. Claims 1-48 and 71-73 are allowable over prior art.

8. Claims 50-59, 61-70 and 75-82 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 1, 9, 15, 20, 25, 50, 61 and 75, the prior art fail to teach or fairly suggest an optical pickup having a collimating lens including a diverging lens with diverging power and a focusing lens with focusing power. The collimating lens satisfies the relationship - $1.5 > f/f_n$, where f is a total focal

length of the collimating lens, and f_n is a focal length of the diverging lens.

As in claim 71, the prior art fail to teach or fairly suggest a collimating lens having the following features:

- (a) a diverging lens with diverging power; and
- (b) the collimating lens satisfies the relationship $-1.5 > f/f_n$, where f is a total focal length of the collimating lens, and f_n is a focal length of the diverging lens.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ota (6,411,442) is pertinent because Ota teaches an optical head having a laser source in a range of less than 500 nm and a collimating lens with both a diverging power and a focusing power

Choi (5,708,643) is pertinent because Choi teaches an optical head having a collimating lens with a diverging power.

Zimmerman (5,636,029) is pertinent because Zimmerman teaches an optical head having a collimating lens with both a diverging power and a focusing power.

11. Any response to this action should be mailed to:
Commissioner of Patents and Trademarks Washington, D.C.
20231
or faxed to:
(703) 305-9051, (for formal communications intended for
entry)
Or:
(703) 305-9731, (for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor
(Receptionist).

Any inquiry of a general nature or relating to the status of
this application should be directed to the Group receptionist
whose telephone number is (703) 305-3900.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kim CHU
whose telephone number is (703) 305-3032.

16 7/25/03

Kim-kwok CHU
Examiner AU2752
July 25, 2003

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